

NIF Project Pours Foundation for Laser Bay Two.

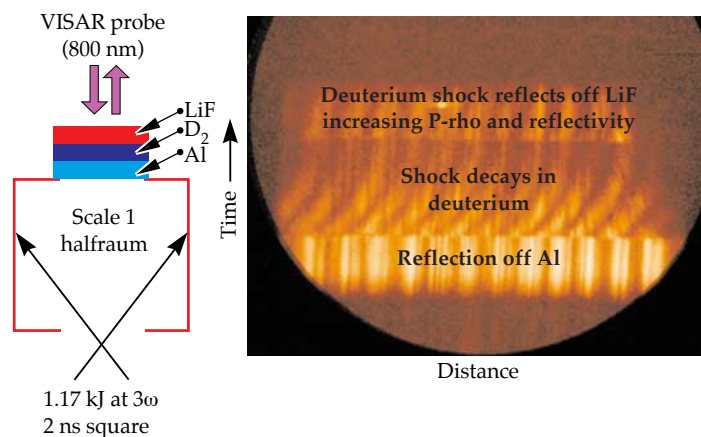
The foundation for the National Ignition Facility's Laser Bay Two is now in place, allowing the beam path supports to be constructed beginning in June. The pour, which was done in 11- and 6-hour blocks spaced six hours apart, required more than 3700 cubic yards of concrete (~370 truck loads) at 300 yards per hour.



The foundation for NIF Laser Bay Two being poured.

Deuterium Properties Measured at Higher Compression.

Previous experiments have measured properties of deuterium on the principal Hugoniot up to 3 Mbar. To extend these measurements to higher compression, we have used a double-shock experiment whose set-up is shown below at left. The fringe position from a velocity-interferometer-system-for-any-reflector (VISAR) record (shown below at right) is proportional to the velocity of the reflecting surface. The VISAR record shows



The setup on the left yields the VISAR record on the right.

fringes initially from the stationary Al ablator at the bottom of the streak record; a decaying shock in the deuterium; and finally the slowly decaying double-shocked deuterium-LiF interface after the deuterium shock hits the LiF. The second shock state in deuterium is determined from the equation of state of LiF, the instantaneous shock velocity in deuterium just before hitting the LiF, and the instantaneous particle velocity of the LiF just after impact.

Tinsley Opens Precision-Optics Facility. A new 30,000-square-foot manufacturing center to produce precision optical components for the National Ignition Facility (NIF) was dedicated in Richmond, CA, on May 18 by the Tinsley division of Silicon Valley Group (SVG), San Jose, CA. The SVG center, together with facilities at Zygo in Middlefield, CT, and Eastman Kodak in Rochester, NY, will be used to fabricate the thousands of precision optical components needed to build NIF. This facility will be staffed by about 40 SVG engineers and skilled technicians, who will utilize one-of-a-kind, computer-controlled precision manufacturing equipment.



Tinsley's new precision optics manufacturing center in Richmond, CA.

Nova Laser Shuts Down. The Nova laser facility has been operating since early 1985. Since that time, approximately 14,000 experiments have been performed for inertial confinement fusion (ICF), weapons physics, and basic science. Nova has completed its ICF mission and is being decommissioned in preparation for the National Ignition Facility (NIF). The last experiment occurred on May 27 by Kim Budil in a weapons physics investigation. Nova is currently being disassembled and its space will be reused in support of NIF and other ICF activities. Many of the components will be distributed to various institutions as a result of a DOE disposition process.